Field definitions for ASPECT tabular data.

Please refer to the following tabular data example:

20170831_182209_A_igm: isobutylene
Flight 4
Estimated Detection Limit = 8.5 ppm

Scan	Latitude	Longitude	Concentration ppm
2180	29.852575	-94.971331	8.500
2181	29.852574	-94.971333	8.500

Line 1. 20170831_182209_A_igm: isobutylene

ASPECT data is generated as the system is flown on a given collection flight line. After processing each compound detected generates a unique file for that flight line. The first line of the tabular data is directly derived from the data file name providing the date, time and compound name as follows:

20170831 → Year = 2017
Month = 08
Day = 31

182209 → UTC time at the start of the data collection line.
Hour = 18
Minute = 22
Second = 09

_A_igm → Interferogram (FTIR) longwave file type

Isobutylene → Compound

Line 2. Flight 4

ASPECT flights are organized by flights for a given project starting at flight 1 and extending through the last flight of the project. In this example, this file is part of Flight 4.

Line 3. Estimated Detection Limit = 8.5 ppm

Line three represents the estimated detection limit for the given compound. This concentration is in volumetric ppm units.

Line 4. Blank

Line 5 and 6. Scan Latitude Longitude Concentration ppm

These lines provide the data column labels.

Line 7. 2180 29.852575 -94.971331 8.500

Starting at line 7 and extending through as many FTIR scans which registered a detection, a line of data for each scan is generated corresponding to the following:

2180 → FTIR scan number. There are typically 3000 scans per data flight line. Only those registering a detection generate a line of data. In this example the flight line only generated two detections corresponding to scan 2180 and 2181.

29.852575 → Latitude value in decimal degrees.

-94.971331 → Longitude value in decimal degrees.

8.500 → FTIR estimated concentration. In this example the detection limit is given indicating that the detection was a trace detection or a detection just above the detection limit.